Álvaro Ponce
Molymet

Topic

Rhenium Production, Emerging Applications, and Additive Manufacturing Developments

Various Additive Manufacturing (AM) technologies impose stringent specifications on the chemical and physical properties of materials, especially for those using powders as feedstock. This presentation will describe how to recover a valuable rare element and transform it into high-purity spherical powder. Traditional and emerging applications of rhenium, along with market trends, will be highlighted. Early-stage developments, in collaboration with Fraunhofer Institute, explore LPBF additive manufacturing using spherical rhenium powders produced through plasma technology, ranging from conventional components to advanced prototypes for property evaluation.

About the Speaker

Materials engineer with a master's degree in materials science from Politecnico di Milano, specializing in powder metallurgy of refractory metals, with a focus on rhenium and molybdenum. Experienced in developing physico-chemical processes to extract materials from contaminated concentrates or raw materials, including purification, tailoring physical properties, and reusing consumables to reduce environmental contamination and promote circular economy practices.